

REMARKS

Reconsideration and allowance are respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1-17 and 19-35 are currently pending in the application. By this Amendment, claims 10-12 and 29 have been amended.

Applicants respectfully acknowledge the indication that claims 11, 12, 15-17, 25 and 26 would be allowable if rewritten in independent form. However, in view of the foregoing amendments and the following remarks, Applicants respectfully submit that all claims should be allowable.

The drawings are objected to under 37 CFR 1.83(a). The Office Action alleges that the drawings do not clearly show the sloping surface having a substantially planar configuration. Applicants respectfully disagree with this assessment.

For example, Figs. 9(b), 9(d), 10(a), and 15(d) clearly illustrate the sloping surfaces 95 of the retaining clip 90. As illustrated, the sloping surfaces 95 are substantially planar or flat. Moreover, Fig. 36 and paragraphs 122-126 of the specification illustrate the ramp angle of the sloping surface. As illustrated, the sloping surface is defined by a ramp angle, which clearly indicates that the sloping surface has a substantially planar configuration. Accordingly, withdrawal of the drawing objection is respectfully requested.

Claims 11, 12 and 29 are objected to because of informalities noted by the Examiner. Claims 11, 12, and 29 have been amended for clarity purposes to overcome this objection. Therefore, withdrawal of the claim objection is respectfully requested.

Claims 1-3, 13, 14, 19, 30 and 31 are rejected under 35 U.S.C. § 102(b) by Kawaguchi et al. (U.S. Patent No. 6,102,727). This rejection is respectfully traversed.

Claim 1 is directed to a plug retaining assembly including a plug including a lug, a socket to interface with the plug, and a retaining clip including a lug engaging mechanism structured to allow disengagement of the plug from the socket at a predetermined release force applied to the plug. The retaining clip is movably positioned with respect to the socket for movement between (1) a non-plug-retaining position, and (2) a plug-retaining position wherein a sloping surface of the lug engaging mechanism engages the lug. The sloping surface has an angle that is at least partially determinative of the predetermined release force. The retaining clip is movable between the non-plug-retaining position and the plug-retaining position while the plug is engaged with the socket.

Kawaguchi does not disclose the arrangement recited in claim 1. As disclosed in column 4, lines 17-37 of Kawaguchi, after the connectors 80 have been completely inserted, the ends 32a of the latching projections 32 are positioned on back surfaces 84 of the connectors 80, i.e., the latching projections 32 are engaged with the connector 80 in a closed or latched position of the latching member 30, as shown in FIG. 4B. As a result, the connectors 80 are prevented from slipping out of connector 1. In order to release the engagement of the latching member 30 from the connectors 80, it is necessary merely to place fingers on the flat surface 32c and move the latching member 30 to the open position.

Thus, Kawaguchi discloses a latching member 30 that prevents release of the connector 80 when in a closed or latched position, and the latching member 30 must be manually moved to an open position to allow release of the connector 80. Kawaguchi does not disclose a retaining clip including a lug engaging mechanism structured to allow disengagement of the plug from the

socket at a predetermined release force applied to the plug, and a sloping surface of the lug engaging mechanism has an angle that is at least partially determinative of the predetermined release force as recited in claim 1. Rather, the latching member of Kawaguchi does not allow disengagement of the plug from the socket at a predetermined release force applied to the plug. Accordingly, withdrawal of the rejection of claim 1 is respectfully requested.

Claims 2, 3, 13, 14, 19, 30 and 31 are allowable by virtue of their dependence on claim 1 and additionally allowable for their recitation of additional patentable subject matter.

Claims 10 and 29 are rejected under 35 U.S.C. § 103(a) over Maegawa (U.S. Patent No. 6,655,971). This rejection is respectfully traversed.

Maegawa does not teach or suggest the plug retaining assembly recited in claim 10 wherein the second end of the retainer includes a lug engaging mechanism structured to allow disengagement of the plug from the socket at a predetermined release force applied to the plug.

The Office Action identifies the housing-side lock 25 of Maegawa as a lug and lever 30 as a retainer having lever-side lock 40. As disclosed in column 4, lines 12-28, the lock 40 locks the lever 30 at the end position. Specifically, the projection 26 of lock 25 fits into lock groove 42 of lock 40 to lock the housings 10, 20. Maegawa does not teach or suggest a retainer that includes a lug engaging mechanism structured to allow disengagement of the plug from the socket at a predetermined release force applied to the plug as recited in claim 10. Rather, the lever 30 of Maegawa locks the housings 10, 20 to prevent disengagement. Accordingly, withdrawal of the rejection of claim 10 is respectfully requested.

Claim 29 is allowable by virtue of its dependence on claim 10 and additionally allowable for its recitation of additional patentable subject matter.

Claims 20 and 21 are rejected under 35 U.S.C. § 103(a) over Kawaguchi et al. This rejection is respectfully traversed. Claims 20 and 21 should be allowable by virtue of their dependence on claim 1 and additionally allowable for their recitation of additional patentable subject matter.

Claims 4-9, 22-24, 27, 28 and 32-35 are rejected under 35 U.S.C. § 103(a) over Kawaguchi et al. This rejection is respectfully traversed.

The Office Action acknowledges that Kawaguchi does not describe the method as claimed. Then, the Office Action alleges that the claimed method is counter part of the apparatus claimed, and therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to develop a particular method for the disclosed apparatus of the cited references. Applicants respectfully disagree with this analysis.

First, all the limitations of a claim must be considered when weighing the differences between the claimed invention and the prior art in determining the obviousness of a method claim. See MPEP 2143.03. Thus, each method step must be considered in judging the patentability of that claim against the prior art.

Second, Kawaguchi does not teach or suggest a retaining clip including a lug engaging mechanism having a wedge angle adapted to allow disengagement of the plug from the socket at a predetermined release force as recited in claims 4 and 7. As noted above, the latching member 30 of Kawaguchi prevents release of the connector 80 when in a closed or latched position.

Third, Kawaguchi does not teach or suggest selecting the wedge angle in accordance with the predetermined release force as recited in claim 4, and selecting a resilience of the retaining clip in accordance with the predetermined release force as recited in claim 7. Kawaguchi fails to disclose the selection of a wedge angle and resilience of the retaining clip.

Withdrawal of the rejection of claims 4 and 7 is respectfully requested.

Claims 5, 6, 22, 27, 32, and 33 are allowable by virtue of their dependence on claim 4 and additionally allowable for their recitation of additional patentable subject matter. Claims 8, 9, 23, 24, 28, 34, and 35 are allowable by virtue of their dependence on claim 7 and additionally allowable for their recitation of additional patentable subject matter.

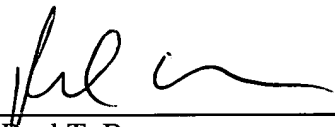
In view of the above amendments and remarks, Applicants respectfully submit that all claims are patentable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, the Examiner is invited to contact the undersigned at the below listed telephone number.

Respectfully submitted,

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By: _____


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